ENVIRONMENTAL ASSESSMENT
Fisheries Division
Montana Fish, Wildlife & Parks
Rock Creek realignment

General Purpose: The 1995 Montana Legislature enacted sections 87-1-272 through 273, MCA that direct Montana Fish, Wildlife & Parks (FWP) to administer a Future Fisheries Improvement Program (FFIP). The program involves providing funding for physical projects to restore degraded fish habitat in rivers and lakes for the purpose of improving wild fisheries. The legislature established an earmarked funding account to help accomplish this goal. Additionally, the 1999 Montana Legislature amended statute sections 87-1-273, 15-38-202 and Section 5, Chapter 463, Laws of 1995 to create a bull trout and cutthroat trout enhancement program. This legislation was amended again in 2013 to open the program to all native fish species (statute section 87-1-283). The program now calls for the enhancement of native fish through habitat restoration, natural reproduction and reductions in species competition by way of the FFIP.

The FFIP tentatively plans to provide partial funding toward a project that would move Rock Creek back to its original channel, thereby capturing important aquatic habitat. The overall goal is to improve fish habitat and water quality to increase populations of Artic Grayling in the Big Hole drainage with minimal construction.

I. Location of Project:

This project will be conducted on Rock Creek, a tributary to the Big Hole River, located near Wisdom within Township 4S, Range 16W, Section 1 in Beaverhead County (Figure 1).

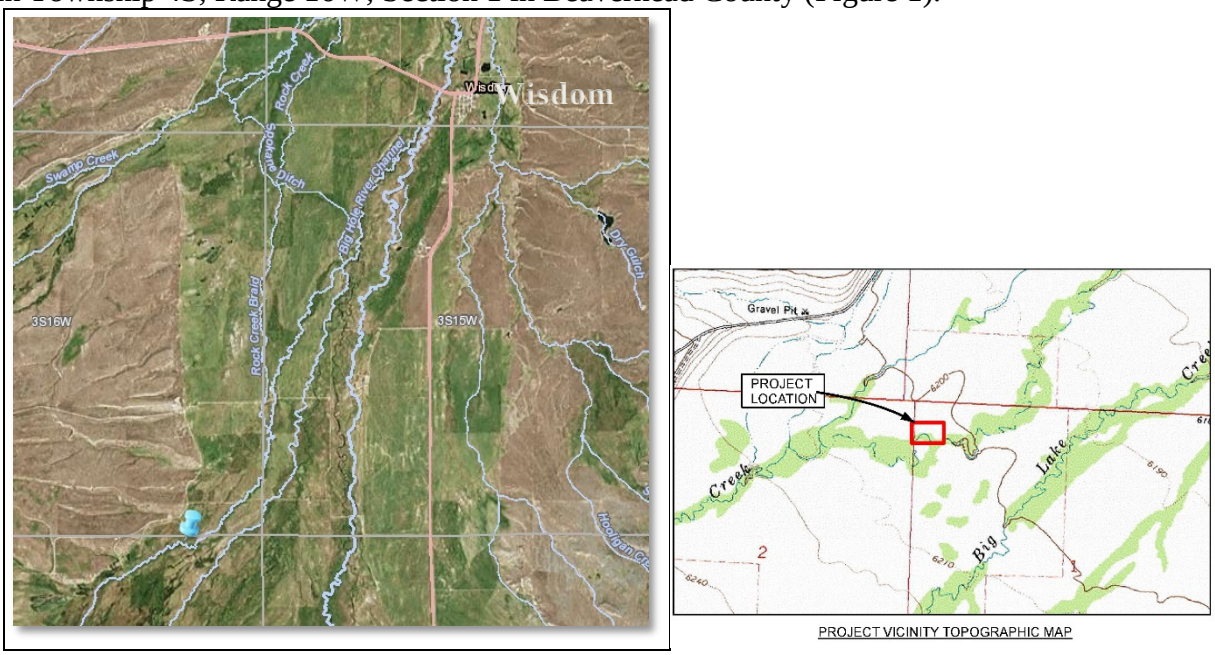

Figure 1. Map of the project site (blue thumbtack).

II. Need for the Project:

One goal within FWP's six-year operations plan for the fisheries program is to "protect, maintain, and restore native fish populations, their habitats, life cycles, and genetic diversity to ensure stewardship of native species." This project will return stream flows to well-established riparian and instream habitat on a ½-mile reach of Rock Creek and is expected to enhance existing fish populations and contribute to on-going conservation efforts for Arctic Grayling in Rock Creek. Montana contains the last remaining native populations of Arctic Grayling in the lower 48 states. The restoration completed in the Big Hole drainage is critical to keep Grayling from being listed under the Endangered Species Act.

III. Scope of the Project:

Rock Creek is a tributary to the Big Hole River near Wisdom and supports populations of Arctic Grayling, as well as other salmonids (Mountain Whitefish, Brook Trout, Brown Trout, and Rainbow Trout), burbot, and native non-game fish (Beaverhead County). A ½ mile reach of Rock Creek that flows through Big Hole Grazing Association (BHGA) property was captured by an irrigation ditch sometime between 1960-1979, making the existing channel into a high-flow channel. The irrigation ditch has become the primary channel fish habitat, but it is unstable with excessive erosion, poorly established vegetation, and limited fish habitat. This project would return the stream to the original Rock Creek channel and use the intact riparian corridor and floodplain to improve habitat and reduce sediment inputs as well as improve overall stream health and water quality. The goal is to improve fish habitat, stream function, and water quality to increase populations of Artic Grayling in the Big Hole drainage while using minimal construction.

The design will construct a plug at the head of the existing channel (former irrigation ditch) to back water up and cause the stream use the original channel (Figure 2). The plug will be constructed using on-site material donated by the landowner at an elevation that will approximate the water level during a 100-year flood event.

This project is expected to cost $28,098.50. Of this total, the FFIP would be contributing up to $13,246.30 to complete the project.

Contributor	In-kind services	In-kind cash
FWP (State Wildlife Grant)		$2,600.05
USFWS Partner's for Fish and Wildlife Program		$11,202.15
Big Hole Grazing Association	$1,050	
Total matching contributions = $14,852.20		

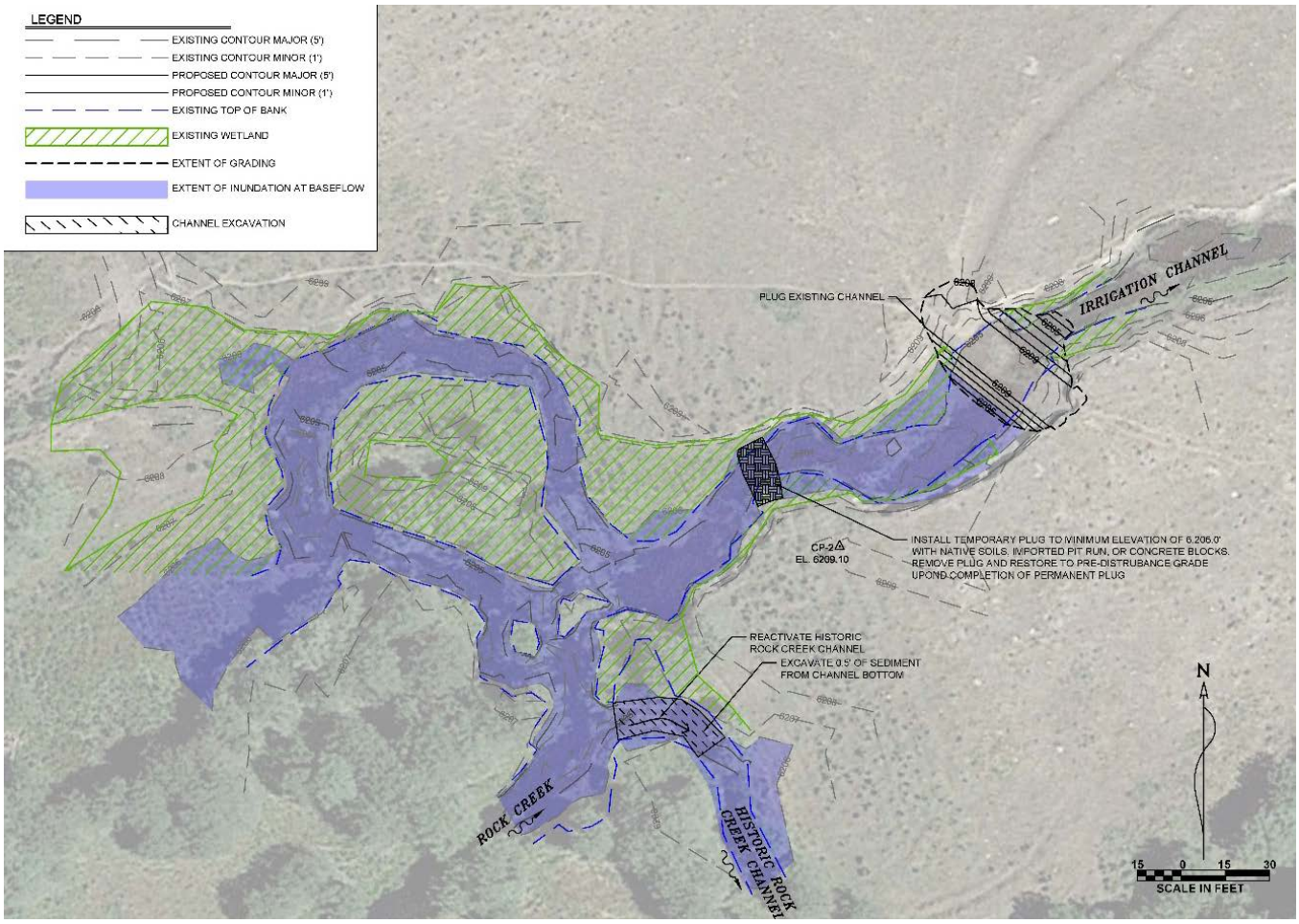

Figure 2. Project overview (design courtesy of Confluence Consulting, Inc.).

IV. Environmental Impact Review Checklist:

Evaluation of the impacts of the Proposed Action including secondary and cumulative impacts on the Physical and Human Environment

Project Title: Rock Creek realignment
Division/Bureau: Fisheries Division (FFIP)
Description of Project: The project would move Rock Creek back to its original channel, thereby capturing important aquatic habitat. The overall goal is to improve fish habitat, stream function, and water quality to increase populations of Artic Grayling in the Big Hole drainage with minimal construction.

A. POTENTIAL IMPACTS TO THE PHYSICAL ENVIRONMENT

Will the proposed action result in potential impacts to:	Unknown	Potentially Significant	Minor	None	Can Be Mitigated	Comments Provided

1. Geology and soil quality, stability and moisture				X		
2. Air quality or objectionable odors				X		
3. Water quality, quantity and distribution (surface or groundwater)		X				X
4. Existing water right or reservation			X			
5. Vegetation cover, quantity and quality			X			
6. Unique, endangered, or fragile vegetative species			X			
7. Terrestrial or aquatic life and/or habitats		X				X
8. Unique, endangered, or fragile wildlife or fisheries species		X				X
9. Introduction of new species into an area			X			
10. Changes to abundance or movement of species		X				X

B. POTENTIAL IMPACTS ON THE HUMAN ENVIRONMENT

Will the proposed action result in potential impacts to:	Unknown	Potentially Significant	Minor	None	Can Be Mitigated	Comments Provided
1. Noise and/or electrical effects				X		
2. Land use				X		
3. Risk and/or health hazards				X		
4. Community impact				X		
5. Public services/taxes/utilities				X		
6. Potential revenue and/or project maintenance costs				X		
7. Aesthetics and recreation				X		
8. Cultural and historic resources				X		X
9. Evaluation of significance				X		
10. Generate public controversy				X		

V. Explanation of Impacts to the Physical Environment

3. Water quality, quantity and distribution (surface or groundwater)

No changes in streamflow would occur in Rock Creek as a result of the proposed project. However, the project would plug the existing channel (irrigation ditch) and move the stream back to the original channel. To address turbidity, operation of equipment in the stream channel will be minimized to the extent practicable. A 318 authorization will be obtained, if necessary, to meet short-term water quality standards. Long term, the project is expected to improve water and habitat quality by using the stream channel that will allow healthy stream function

7. Terrestrial or aquatic life and/or habitats

This project would restore the stream to its original channel, which contains higher quality habitat and will encourage healthy stream function. Long term the project is expected to benefit aquatic life through superior habitat and water quality.

8. Unique, endangered, or fragile wildlife or fisheries species

This project will affect Arctic Grayling, which is federally recognized and a Species of Concern in Montana. The impacts on this species due to this project are predicted to be positive, potentially increasing survival and abundance.

10. Changes to abundance or movement of species

Improved habitat could lead to increased abundance of all species found in Rock Creek. Reduced sediment and improved habitat has the potential to improve fish population abundance through improved spawning, rearing, and overall habitat. This project is expected to have a positive impact on abundance.

VI. Explanation of Impacts to the Human Environment

8. Cultural and historic resources

Cultural clearance was obtained by the US Fish & Wildlife Service Partners Program.

VII. Narrative Evaluation and Comment.

There are no anticipated cumulative effects.

VIII. Discussion and Evaluation of Reasonable Alternatives.

1. No Action Alternative.

If no funding is provided through the FFIP, either the applicant would have to seek additional sources of funding to complete the project, or the affected area of Rock Creek would remain impaired, with the stream captured by the former irrigation canal.

2. The Proposed Alternative.

The proposed alternative intends to provide partial funding through the FFIP to restore Rock Creek to its original channel and improve habitat and water quality for aquatic species.

IX. Environmental Assessment Conclusion Section.

1. Other groups or agencies contacted or which may have overlapping jurisdiction:

U.S. Army Corps of Engineers, Beaverhead Conservation District, Department of Natural Resources and Conservation.

2. Evaluation and listing of mitigation, stipulation, or other control measures enforceable by the agency or another government agency:

None.

3. Is an EIS required?

No. We conclude, from this review, that the proposed activities will have an overall positive impact on the physical and human environment, and will therefore not require the extensive analysis associated with an EIS.

4. Level of public involvement.

The project application to the FFIP has been posted on the FWP webpage for public comment. No comments have been received to date. The proposed project was reviewed and supported by the public review panel of the FFIP. The proposed project also will be reviewed by the Fish & Wildlife Commission, and funding will be contingent upon their approval. The EA will be distributed to all individuals and groups listed on the cover letter and will be published on the FWP webpage: **www.fwp.mt.gov**.

5. Duration of comment period?

Public comment will be accepted through 11:59 PM, February 4th 2018.

6. Person(s) responsible for preparing the EA.

Michelle McGree, Program Officer
Montana Fish, Wildlife & Parks
1420 East 6th Avenue, P.O. Box 200701
Helena, MT 59620

Telephone: (406) 444-2432, E-mail: mmcgree@mt.gov
Contributor: Austin McCullough, FWP